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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/618,522

07/11/2003

Tom Etheridge

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09/30/2005

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EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/618,522	Applicant(s) ETHERIDGE, TOM	
	Examiner Brian K. Talbot	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 26-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The response filed 8/8/05 has been considered and entered. Claims 1-30 remain in the application with claims 1-8 and 26-30 being directed toward non-elected inventions.
2. This application contains claims 1-8 and 26-30 drawn to an invention nonelected with traverse in Paper filed 5/10/05. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
3. In light of the response filed 8/8/05 the objection to the specification has been withdrawn. The rejections concerning Gulla (3,846,138) and Beltzer et al. (3,222,218) have been withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

5. With respect to claim 14, the term “underprinted” is confusing. The Examiner questions how the second composition is “underprinted” with respect to the first composition when it is applied to the first coating. Clarification is requested.

With respect to claim 15, the term “overprinted” is not further limiting as the claims recite applying a first composition and subsequently applying a second composition onto the first composition. Clarification is requested.

Claim Rejections - 35 USC § 103

6. Claims 9-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuttle (3,896,252) in combination with Miller (4,668,533).

Tuttle (3,896,252) teaches a process of metal plating on plastics comprising aminating the substrate by contacting with a diaminopropane in a solvent, contacting the treated substrate with a noble metal salt (including palladium) and finally contacting the palladium treated substrate with a reducing agent to form a catalyst layer. The catalyst layer is further plated in an electroless plating process (abstract).

Tuttle (3,896,252) fails to teach the process utilized to form electrically conductive pathways as well as applying the palladium and reducing solution by ink-jetting.

Miller (4,668,533) teaches ink jet printing of substrates to form circuits for the manufacturing of printed circuit boards. Ink jetting is utilized to apply sensitizers and activators (i.e. catalysts) on the substrates in patterns prior to contacting with electroless plating to form the circuits (abstract and col. 2, line 25 – col. 3, line 45).

Therefore, it would have been obvious for one skilled in the art at the time the invention was made to have modified Tuttle (3,896,252) process manufacture circuitry by ink-jet printing as evidenced by Miller (4,668,533) with the expectation of achieving similar success.

It is noted that a complex is applied separately from the metal as opposed to being applied as a single solution as claimed. While the Examiner acknowledges this fact, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar regardless of the number of steps utilized as

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long as the steps were metal and amine complex were combined prior to reducing the metal complex.

With respect to the heating step, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar success regardless of the application of a heating step during the reducing step. If Applicant disagrees, Applicant is invited to supply a showing of unexpected results regarding the criticality of the claimed heating step. It is noted that the showing should support "unexpected" as the prior art clearly shows, while silent, that the process without a heating step is successful.

Response to Amendment

7. Applicant's arguments filed 8/8/05 have been fully considered but they are not persuasive.

Applicant argued that the 35 USC 112 rejections are not proper.

With respect to claim 19, the Examiner has withdrawn the rejection. With respect to claims 14 and 15, the rejections are maintained for the following reasons. Applicant argued that the steps (a), (b) and (c) could be performed in any order. The Examiner disagrees. Step (b) recites "applying to at least a portion of the predetermined pattern" which is step (a). Hence, step (a) must be performed first or there wouldn't be and "predetermined pattern" to apply the second composition to. With respect to claim 15, this would render this claim non-limiting as rejected above.

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Applicant argued that the references fail to teach a aliphatic amine complex.

The Examiner agrees in regards to Gulla (3,846,138) and Beltzer et al. (3,222,218).

However, the Examiner disagrees with respect to Tuttle (3,896,252) who teaches aliphatic amines such as 1,3 -diaminopropane, 1,2-diaminopropane and ethylenediamine that are the same aliphatic amines disclosed in the instant invention on pg. 5.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian K Talbot
Primary Examiner
Art Unit 1762

BKT